CTEH®

THE SCIENCE OF READY℠

SOUTH 4 GROUP FIRE

Port Neches, TX

Preliminary Community Air Monitoring

Data Summary

December 15, 2019

Project #112312

1.0 Introduction

On November 27, 2019 at approximately 04:00 Central Standard Time (CST), TPC Group requested that CTEH® provide air monitoring and analytical air sampling support in response to a tank fire at the TPC Group facility located in Port Neches, Texas. CTEH® arrived on-site on November 27, 2019 at 08:00 CST and began real-time air monitoring and analytical air sampling operations at approximately 10:00 CST.

This report summarizes real-time air monitoring data collected from December 14, 2019 06:00 CST to December 15, 2019 06:00 CST within the community.

2.0 Air Monitoring and Sampling Methods

CTEH® developed and implemented an Air Sampling Analysis Plan (SAP) to document and quantify the potential release of fugitive emissions from the incident at ground level. The SAP has been approved by local, state, and federal representatives of the on-site Unified Command (UC). In accordance with the SAP, sustained 1,3-butadiene detections of 0.5 ppm or greater and volatile organic compound (VOC) detections of 5.0 ppm or greater in the community are to be communicated to the Federal On-Scene Coordinator.

Real-time air monitoring was conducted for 1,3-butadiene, volatile organic compounds (VOCs), and atmospheric flammability measured as the percentage of the lower explosive limit (%LEL). Real-time air monitoring was conducting using handheld instruments including MultiRAEs and UltraRAEs. All instrumentation was calibrated at least once per day or per manufacturer's recommendations. Target analytes were measured as listed in **Table 1** below. Roaming air monitoring was performed in community areas with handheld instruments. All handheld air monitoring was conducted in the breathing zone.

In addition, CTEH® also collected analytical air samples for analysis of airborne VOCs and asbestos in the surrounding community at the time of this report. These samples are sent to a 3rd-party accredited laboratory for subsequent chemical analysis. Air sampling data will be summarized in separate reports.

3.0 Air Monitoring Results

Attachment A provides maps of the locations of handheld air monitoring and analytical air sampling in community residential areas, as well as a map of zones within the community. A cumulative summary of the community handheld air monitoring results is presented in **Table 1. Table 2** and **Table 3** include a subset of the cumulative data provided in Table 1 and summarize the results of handheld air monitoring conducted in Zones 1 and 8, respectively.

Table 1: Community Handheld Real-Time Air Monitoring Results (All Zones)

Analyte	Instrument	# of Readings	# of Detections	Range*
1,3-Butadiene	UltraRAE	892	4	0.02 - 0.04 ppm
%LEL	MultiRAE	530	0	< 1 %
VOCs†	MultiRAE	890	0	< 0.1 ppm

*If no detection was observed, the instrument detection limit preceded by a "<" symbol is listed. These data have not undergone QAQC and should be considered preliminary at this time.
†Volatile organic compounds.

Table 2: Zone 1 Community Handheld Real-Time Air Monitoring Results‡

Analyte	Instrument	# of Readings	# of Detections	Range*
1,3-Butadiene	UltraRAE	249	0	< 0.01 ppm
%LEL	MultiRAE	151	0	< 1 %
VOCs†	MultiRAE	248	0	< 0.1 ppm

*If no detection was observed, the instrument detection limit preceded by a "<" symbol is listed. These data have not undergone QAQC and should be considered preliminary at this time.
†Volatile organic compounds.
‡These results are a subset of the results provided in Table 1.

Table 3: Zone 8 Community Handheld Real-Time Air Monitoring Results‡

Analyte	Instrument	# of Readings	# of Detections	Range*
1,3-Butadiene	UltraRAE	324	4	0.02 - 0.04 ppm
%LEL	MultiRAE	179	0	< 1 %
VOCs†	MultiRAE	323	0	< 0.1 ppm

*If no detection was observed, the instrument detection limit preceded by a "<" symbol is listed. These data have not undergone QAQC and should be considered preliminary at this time.
†Volatile organic compounds
‡These results are a subset of the results provided in Table 1.

No readings of 1,3-butadiene reported during this air monitoring period exceeded the respective UC-approved action level of 0.5 ppm. No detections of %LEL or VOCs were observed in the community during this reporting period.

4.0 Weather Conditions

Attachment B contains a wind rose depicting wind speed and direction for this reporting period. Data were acquired from the Nederland High School (C1035) meteorological station located on 2108 N 18th St approximately 4 miles west of the incident site.

Attachment A

CTEH Community Air Monitoring Locations

Handheld Real-Time Community Monitoring Locations

South 4 Group Fire | Port Neches, TX | 12/14/2019 06:00 - 12/15/2019 06:00 CST

Project:112312
Client: TPC
City: Port Neches, TX
County: Jefferson

COORDINATE SYSTEM: *NAD 1983 UTM Zone 15N* **DATUM:** *North American 1983*

LAST UPDATED: *12/15/2019 11:00:51 AM*

ED_004345_00000747-00006

Handheld Real-Time Community Monitoring Locations (1,3-Butadiene Detections)

South 4 Group Fire | Port Neches, TX | 12/14/2019 06:00 - 12/15/2019 06:00 CST

Project:112312
Client: TPC
City: Port Neches, TX
County: Jefferson

COORDINATE SYSTEM: *NAD 1983 UTM Zone 15N* **DATUM:** *North American 1983* **LAST UPDATED:** *12/15/2019 10:53:23 AM*

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Handheld Real-Time Community Monitoring Locations (1,3-Butadiene Non Detects)

South 4 Group Fire | Port Neches, TX | 12/14/2019 06:00 - 12/15/2019 06:00 CST

Project:112312
Client: TPC
City: Port Neches, TX
County: Jefferson

COORDINATE SYSTEM: *NAD 1983 UTM Zone 15N* **DATUM:** *North American 1983*

LAST UPDATED: *12/15/2019 10:57:38 AM*

ED_004345_00000747-00008

Handheld Real-Time Community Monitoring Locations (%LEL)

South 4 Group Fire | Port Neches, TX | 12/14/2019 06:00 - 12/15/2019 06:00 CST

Project:112312
Client: TPC
City: Port Neches, TX
County: Jefferson

COORDINATE SYSTEM: *NAD 1983 UTM Zone 15N* **DATUM:** *North American 1983*

LAST UPDATED: *12/15/2019 10:56:20 AM*

ED_004345_00000747-00009

Handheld Real-Time Community Monitoring Locations (VOCs)

South 4 Group Fire | Port Neches, TX | 12/14/2019 06:00 - 12/15/2019 06:00 CST

Project:112312
Client: TPC
City: Port Neches, TX
County: Jefferson

COORDINATE SYSTEM: *NAD 1983 UTM Zone 15N* **DATUM:** *North American 1983*

LAST UPDATED: *12/15/2019 10:59:37 AM*

ED_004345_00000747-00010

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Analytical Sampling Locations

South 4 Group Fire | Port Neches, TX | 12/14/2019 06:00 - 12/15/2019 06:00 CST

Project:112312
Client: TPC
City: Port Neches, TX
County: Jefferson

COORDINATE SYSTEM: *NAD 1983 UTM Zone 15N* **DATUM:** *North American 1983*

LAST UPDATED: *12/15/2019 11:01:41 AM*

Attachment B

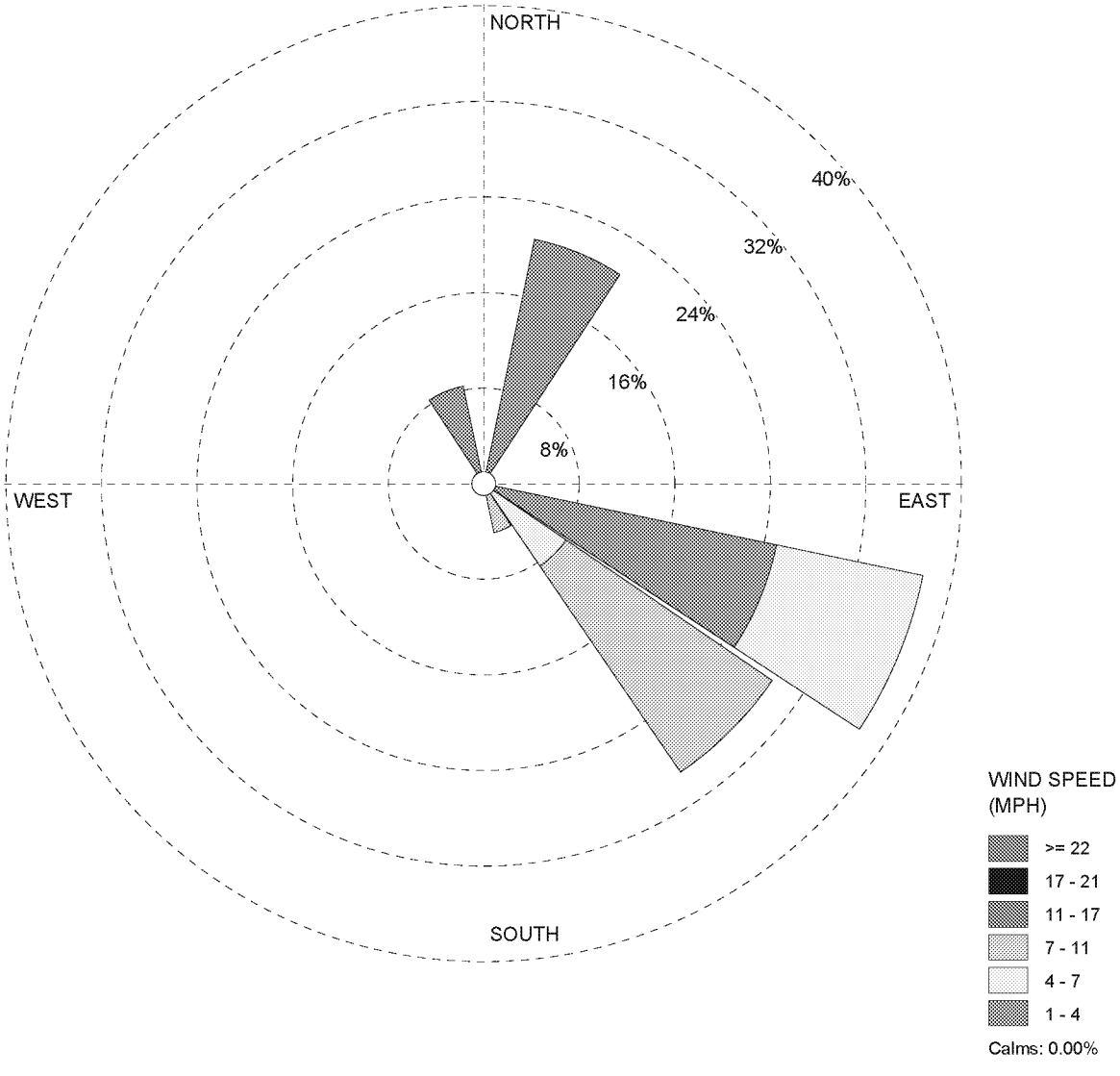
Meteorological Conditions

WIND ROSE PLOT:

TCEQ CAMS 1035

DISPLAY:

Wind Speed
Direction (blowing from)



COMMENTS:	DATA PERIOD:	COMPANY NAME:	
	Start Date: 12/14/2019 - 06:00 **End Date: 12/15/2019 - 05:00**	**CTEH, LLC**	
	CALM WINDS:	TOTAL COUNT:	
	0.00%	**24 hrs.**	
	AVG. WIND SPEED:	DATE:	PROJECT NO.:
	4.46 MPH	**12/15/2019**	**112312**

WRPLOT View - Lakes Environmental Software